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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,221	12/30/2003	Ju-Ho Kim	11038-145-999	1483
24341	7590	12/12/2006	EXAMINER	
MORGAN, LEWIS & BOCKIUS, LLP. 2 PALO ALTO SQUARE 3000 EL CAMINO REAL PALO ALTO, CA 94306			BURCH, MELODY M	
			ART UNIT	PAPER NUMBER
			3683	

DATE MAILED: 12/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/749,221	Applicant(s) KIM	
	Examiner Melody M. Burch.	Art Unit 3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/26/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/26/06 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP-11291735 (JP'735) in view of US Patent 4677263 to Hamilton et al. and US Patent 6918472 to Dernebo.

Re: claim 1. JP'735 shows in figure 7 a pneumatic suspension system comprising a cylinder 22, a piston 21 disposed inside the cylinder for reciprocation in response to vehicle vibration, a piston rod 25 connected to the piston to protrude outside of the cylinder, a main spring 34 mounted inside the cylinder for absorbing

shock, detecting means 36 for detecting a position and motion of the piston, an air nozzle or portion of 31 to the left of element 7, an air passage or portion of element 31 to the right of element 7 and connected to element 23 for connecting an upper side (of element 23 of cylinder 22) and lower side (of element 23 of cylinder 22) of the cylinder 22 so that air in the upper space and lower space (of the cylinder) can be circulated, and a valve 7 for opening and closing the air passage.

JP'735 is silent with regards to the air nozzle being connected to an actuator and with regards to the valve specifically being a solenoid valve. Hamilton et al. teach in figure 5 the use of an air nozzle 31 being connected to an actuator 28 and the use of a valve being in the form of a solenoid valve.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the air nozzle of JP'735 to have been connected to an actuator, as taught by Hamilton et al., in order to provide a means of permitting fluid supply to the cylinder to effect piston movement and to provide suspension control.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the valve of JP'735 to have been a solenoid valve, as taught by Hamilton et al., in order to provide a means of electrically controlling the valve to enable active control of fluid flow within the system.

JP'735 shows an air passage in the form of an exhaust passage extending from the upper chamber and a vent exiting out of the lower chamber into the atmosphere, but is silent with regards to the air passage connecting the upper chamber and the lower chamber.

Dernebo teaches in figure 5 the use of an air passage 138,140,148,150 for connecting an upper chamber and a lower chamber of a cylinder and teaches in col. 8 lines 21-24 that the valves within the chamber may be of the type to either connect the upper and lower chamber fluidly or exhaust the chambers to atmosphere.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the air passage of JP'735, as modified, to have included an air passage for connecting the upper and lower chambers including valves, as taught by Dernebo, in order to provide a means of either fluidly connecting the upper and lower chambers or exhausting the chambers to atmosphere to adjust the damping characteristics of the shock absorber depending on application.

Re: claim 2. JP'735, as modified, teaches in figure 7 of JP'735 wherein the detecting means comprises a magnetic belt 37 attached to the piston rod along a longitudinal direction thereof and a sensor 35 for sensing the position of the piston via the magnetic belt.

Re: claim 3. JP'735, as modified, teaches in figure 7 of JP'735 wherein the cylinder is mounted at an inner upper side and an inner lower side thereof with shock absorbing members or air particles in the upper and lower chamber regions, respectively, for absorbing shock generated by movement of the piston.

Re: claim 4. JP'735, as modified, teaches in figure 7 of JP'735 wherein the shock absorbing members are fixed to auxiliary springs 30 and 30a, particularly when the system is static, each closely abutted to the inner surface and inner lower surface of the cylinder, respectively.

Response to Arguments

4. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 571-272-7114. The examiner can normally be reached on Monday-Friday (6:30 AM-3:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James McClellan can be reached on 571-272-6786. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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mmb

December 10, 2006

Melody M. Burch
Melody M. Burch
Primary Examiner
Art Unit 3683
12/10/06